

WHAT IS CLAIMED IS:

1. A liquid crystal display device, comprising:
 - a transfective liquid crystal panel, having:
 - opposing upper and lower substrates,
 - a liquid crystal layer disposed between the substrates and having liquid crystal molecules disposed in a twisted manner at an angle in the range of from 220 to 270 degrees,
 - an upper retardation film and a lower retardation film sandwiching the liquid crystal layer from above and below the liquid crystal layer,
 - an upper polarizer and a lower polarizer disposed on the outer surface of the upper retardation film and the outer surface of the lower retardation film, respectively, and
 - a transfective layer, which is disposed on an inner side of the lower substrate, that reflects and transmits a portion of light incident upon the liquid crystal panel; and
 - an illuminating device disposed on a back surface of the liquid crystal panel, wherein, in a pixel in a bright display of the liquid crystal panel, light emitted from the illuminating device and that is incident upon the upper polarizer from the liquid crystal layer is elliptically polarized light, and the product of an optical anisotropy Δn and a thickness d of the liquid crystal layer, $\Delta n \cdot d$, is in a range of from 820 nm to 950 nm, and
 - the liquid crystal panel having a directional reflection function which causes light obliquely incident upon the liquid crystal panel to exit mainly in a direction perpendicular to the liquid crystal panel rather than in a specular reflection direction.
2. The liquid crystal display device according to Claim 1, a ratio $R70/R25$ being set within a range of Condition (1) using an N-I point, which is represented by T_{ni} (in °C) in Condition (1), of liquid crystals of the liquid crystal layer:

$$\left(\frac{T_{ni} - 80}{T_{ni} - 20} \right)^{0.22} < \frac{R70}{R25} < \left(\frac{T_{ni} - 30}{T_{ni} - 20} \right)^{0.22} \quad (1)$$

, where $R70$ is the product of an optical anisotropy Δn and a thickness d of the upper retardation film, $\Delta n \cdot d$, at 70°C, and $R25$ is that at 25°C.

3. The liquid crystal display device according to Claim 2, the ratio $R70/R25$ being set within a range of Condition (2) using the N-I point, which is represented by T_{ni} (in °C) in Condition (2), of the liquid crystals of the liquid crystal layer:

$$\left(\frac{T_{ni} - 75}{T_{ni} - 20} \right)^{0.22} < \frac{R70}{R25} < \left(\frac{T_{ni} - 40}{T_{ni} - 20} \right)^{0.22} \quad (2)$$

, where R70 is the product of the optical anisotropy Δn and the thickness d of the upper retardation film, $\Delta n \cdot d$, at 70°C, and R25 is that at 25°C.

4. The liquid crystal display device according to Claim 1, wherein, in the pixel in the bright display of the liquid crystal panel, ellipticity of the elliptically polarized light which impinges upon the upper polarizer from the liquid crystal layer is greater than 0 and equal to or less than 0.5 at 25°C.

5. The liquid crystal display device according to Claim 1, the liquid crystal panel comprising a sloping reflective layer.

6. A liquid crystal display device according to Claim 1, the liquid crystal panel comprising an off-axis anisotropic light scattering layer.

7. A liquid crystal display device according to Claim 1, the liquid crystal panel comprising an anisotropic optical layer that transmits light that impinges thereupon from a front side of the liquid crystal panel and diffracts light that impinges thereupon from a back side of the liquid crystal panel.

8. A liquid crystal display device according to Claim 1, the transflective layer being a reflective layer that is formed partly within a dot area of the liquid crystal panel.

9. A liquid crystal display device according to Claim 1, the transflective layer being a layer that partly reflects and transmits a particular polarized component of incident light or a component of the incident light having a wavelength which lies in a particular wavelength region.

10. An electronic device comprising the liquid crystal display device of Claim 1.